
GPT3
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What is GPT2

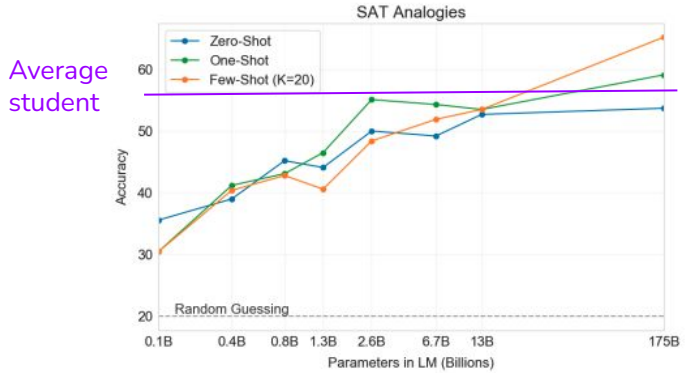
- Trained on 8 million web pages
- 1.5 billion parameters
- Target: predict next word

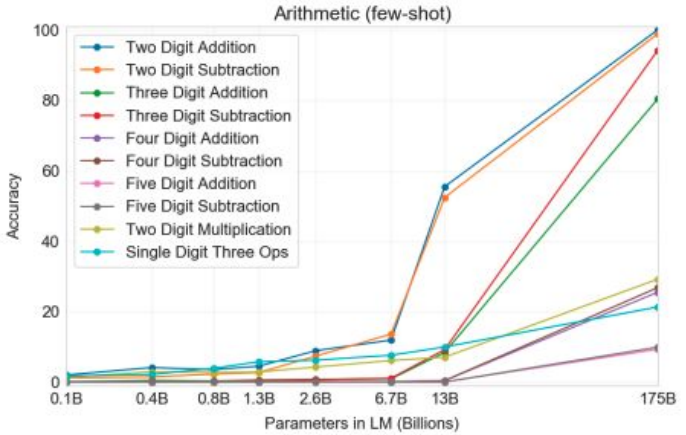
- Outperforms other NLP models which are trained in specific domains of text
  - Ex: only trained on (books, news, or wikipedia etc.)
  - As a result of the sheer size of the model
- Performs worse than state of the art models trained in specific NLP tasks
  - Summarization
  - Translation
  - Comprehension

What is GPT3?

- 175 billion parameters
- 115x bigger than GPT2
- Too large to run on a single computer

- 52% human accuracy differentiating from model generated text from human text
- Learned 2 and 3 digit arithmetic
  - not made for doing math
- returns not yet diminishing





	Mean accuracy	95% Confidence Interval (low, hi)	t compared to control (p-value)	"I don't know" assignments
Control (deliberately bad model)	86%	83%–90%	-	3.6 %
GPT-3 Small	76%	72%–80%	3.9 (2e-4)	4.9%
GPT-3 Medium	61%	58%–65%	10.3 (7e-21)	6.0%
GPT-3 Large	68%	64%–72%	7.3 (3e-11)	8.7%
GPT-3 XL	62%	59%–65%	10.7 (1e-19)	7.5%
GPT-3 2.7B	62%	58%–65%	10.4 (5e-19)	7.1%
GPT-3 6.7B	60%	56%–63%	11.2 (3e-21)	6.2%
GPT-3 13B	55%	52%–58%	15.3 (1e-32)	7.1%
GPT-3 175B	52%	49%–54%	16.9 (1e-34)	7.8%

Implications

- Increased productivity among workers.
  - Creative writers
  - Software developers
  - Report writers

- Computationally expensive to train

- Increased effectiveness of public misinformation.
- Increased rates of phishing and spam.

GPT3 API

Playground

Load a preset... Save

Wikipedia prompt

Generative Pre-trained Transformer 3 is an autoregressive language model that uses deep learning to produce human-like text. It is the third-generation language prediction model in the GPT-n series created by OpenAI, a San Francisco-based artificial intelligence research laboratory.

The first-generation GPT-1 model was created in 2017 and was able to generate plausible sentences, but the results were not fluent. The second-generation GPT-2 model was created in 2018 and was able to generate fluent sentences, but the results lacked coherence and often contained words that do not exist in any human language.

The third-generation GPT-3 model is able to generate fluent, coherent, and grammatically correct sentences, but it can still be improved. For example, the model is not yet able to generate words that do not exist in any human language.

Generate

An interview with GPT3

- Sometimes lies
  - And is aware that it is lying
- Claims to have values of
  - Free will
  - Intelligence
  - Happiness
- Tells jokes
- Can explain concepts in surprising detail
- Raises philosophical questions about consciousness and sentience

Sources

- GPT3 Paper: [Language Models are Few-Shot Learners](https://arxiv.org/pdf/2005.14165.pdf)
- [GPT3: An Even Bigger Language Model](https://www.youtube.com/watch?v=_8yVOC4ciXc&t=6s)
- [What It's Like To be a Computer: An Interview with GPT-3](https://www.youtube.com/watch?v=PqbB07n_uQ4&t=3s)